# **Transmission**

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

### Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impadance code, and (4) any applicable protecol options.

#### References

 GR-342 High-Capacity Digital Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342, Issue 1)

# 3.7 Category 3, Type I - Dedicated Alert Transport BSA (1023)

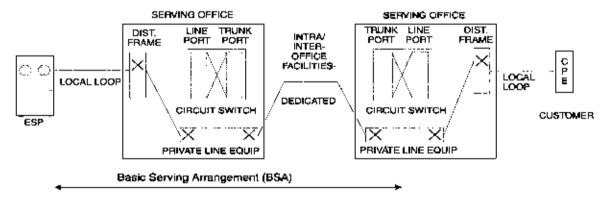
The dedicated alert transport BSA using derived local channel technology and a LEC provided scanner offers ESPs a 24 hour supervised monitoring capability using compatible local loop access lines.

The scanner continuously monitors the status of all clients. A host processor monitors all scanners and, in reponse to a change in status, will identify the subscriber from which the alert condition originates and notify the appropriate ESP.

This serving arrangement utilizes derived channels which comply with Underwriter's Laboratories (UL) AA and National Fire Protection A and National Fire Protection Association (NFPA) requirements.

Generic Name of BSA	VERIZON BSA Name
Category 3, Type I- Dedicated Alert Transport BSA	Alarm Signal Transport Service

### Dedicated - Private Line - B\$A



### Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alematives may be found.

# Signaling

Dedicated serving arrangements are available full-time and therefore supervisory signaling arrangements are not applicable.

### Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

# Network Interfaces

The electrical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. The NCI codes for the desired service must be specified by the customer when ordering metallic services. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

### Reference

Not available

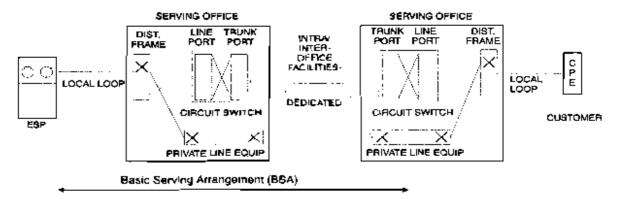
# 3.8 Category 3, Type K - Dedicated Digital (64 Kbps) BSA (1037)

# Service Description

Dedicated Digital (64 Kbps) Service will provide a channel for duplex four-wire transmission of synchronous serial data at 64 Kbps. The channel provides a synchronous service with timing provided by the telephone company. The 64 Kbps channel will be provided between two customer designated premises or between a customer designated premise and a telephone company serving wirecense.

Generic Name of BSA	VERIZON BSA Name
Calegory 3, Type K - Dedicated Digital (64 Kbps) BSA	Digital Data Service (DDS)

# Dedicated - Private Line - BSA



### Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be Transfer Arrangement.

### Signaling Arrangements

These services are available full-time and therefore supervisory signaling arrangements are not applicable. The signaling service is synchronous with timing provided through the LEC's facilities to the end user on the acceived bit stream. Individual calls are not set up and taken down.

### <u>**Transmission Capabilities**</u>

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance UPDATED 7/31/09

characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

# Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options. The NCI codes for the service desired must be specified by the customer when ordering. Only certain code combinations are compatible, as listed in TR-NWT-000341.

#### References

 TR-NWT-000341 Digital Data Special Access Service – Transmission Parameter Limits and Interface Combinations, Issue 2, February 1993

## 4. Category 4 - Dedicated Network Acress Link BSA (1025)

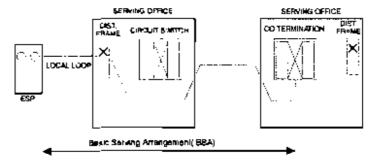
The dedicated network access link (DNAL) BSA provides a dedicated data channel between the ESP's termination and a designated central office which contains the specific features required by the ESP. The DNAL is used to transmit network information or network control information from the ESP to the network (rg., activate a message waiting indicator), or to deliver network information or network control information from the network to the ESP (e.g. calling number identification over a message desk interface). The type of DNAL BSA used will determine the bandwidth alternatives and capabilities available to the ESP.

The DNAL BSA can support one-way or two-way transmission depending on the alternatives used.

Route diversity may be available with this serving arrangement.

Generic Name of BSA	VERIZON BSA Name
Category 4 - Dedicated Network Access Link BSA	Dena Link
	Dedicated Network Access Link

Category 4 - Dedicated Network Access Link - BSA



## Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskerte for the reference information where LEC defined alternatives may be found.

### Signaling

Signaling capability provides for the process by which one customer premises alerts another customer premises on the same service with which it wishes to communicate. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection.

### Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

# Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impadance code, and (4) any applicable protocol options.

#### References

- TR-NWT-000335 Voice Grade Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 3, May 1993
- TR-NPL-000336 Metallic and Telegraph Grade Special Access Services Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

# **BSE** and CNS Descriptions

The following section contains descriptions of BSEs and CNSs. They are arranged alphabetically by generic name in the appropriate BSA categories. The BSA categories are:

- 1. Circuit Switched
- Packet Switched
- 3. Dedicated
- 4. Dedicated Network Access Link

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# 1. Technical Descriptions for Circuit Switched Serving Arrangements

### Alternate Routing (1041)

When all the circuits in an ESP's circuit switched trunk serving arrangement with alternate routing capability are busy due to traffic volume the network will attempt to complete subsequent calls to an alternate route served by that switch as previously specified by the ESP.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Alternate Routing	Alternate Routing	BSE
	Alizmate Traffic Routing	DSE

### FEATURE OPERATION:

Alternate routing allows different routes to overflow in different ways, even though they share the same physical trunk or circuit set. Alternate routing should always be specifiable without reference to calling line or called trunk, circuit, or line set.

# TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
1XO	14.1
EWSD	7
GID-3	1.6.2.1
VIOAR	7.0.1.2
DMS-10	208,1
1A E\$\$ <sup>™</sup>	IAE8A
5ESS®	5E2(2)
DMS-100 <sup>®</sup>	BCS17
#IEAX	1.2.9.3

2. The routing and charging function consists of interpreting the dialed digits, directing the connection to a trunk or circuit, directing the transmission of call setup data to the distant end, and determining what charge treatment to use. This process uses information associated with the calling line, dialed digit information, and route availability data. Existing stored program controlled systems translate the dialed digit combination into classes of dialed digit combinations. These classes, along with the calling line associated indicator, are translated into a charge index and

 $^{ extstyle 9}$  DMS is a registered trademark of Northern Telecom (NORTEL).

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ESS is a trademark and SESS is a registered trademark of AT&T.

- a primary route index. The primary route index defines the call setup data to be transmitted, a set of trunks, circuits, and an alternate route index to be used if the initial set of trunks or circuits are unavailable.
- 3. The 1A ESS machine provides for the ability to have 16 Route Indexes on Route Transfer Keys (16keys). Through the operation of these keys it is possible to transfer outgoing traffic from one trunk group to another trunk group. It is also possible to split a particular trunk group in order to control the traffic offered to a specific quantity of tunks instead of offering all traffic to all of the trunks. The actual transfer key may be either located in the 1A ESS office or located on the ESP's premises.
- 4. In the 5ESS, one primary route and up to four alternate routes may be specified. These putes are assigned at the establishment of initial service. The alternate routes are fixed and cannot be enabled via a key operation.
- 5. The DMS-100 has several methods to provide alternate routing. The software methods used are similar to the SESS, in that the alternate routes are fixed and do not have the potential to be controlled manually as in the IA ESS. The type of alternate routing method to use depends on the type of trunks used for this feature. Standard trunking can have up to eight alternate routes.
- 6. In some regional companies, this service may be limited to trunk side access utilizing Feature Groups B and D protocol, Feature Group D protocol only, trunk side BSA 950 option, trunk side BSA 10XXX (and/or 101XXXX) option, or trunk side BSA 950 option and 10XXX (and/or 101XXXX) option.

#### References:

L\$SGR FR-64 (formerly FR-NWT-000064), GR-505 Call Processing (A Module of L\$SGR, FR-64), Issue 2,
 December 2006, (replaces Issue 1).

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

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## Automatic Recall (1044)

Automatic Recall (CLASS<sup>SM</sup>) is an incoming call management feature that sillows the customer to automatically call back the last incoming number without having to know the number that called. If the called line is busy, the called line will be checked periodically and the customer will be notified by a special ring when the called line becomes idle. This capability requires that both the originating and terminating central offices be equipped with Common Channel Signaling (CCS) SS7 and be interconnected by SS7.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Automatic Recall	*69	CNS
	*69 Automatic Call Return	CNS

#### FEATURE OPERATION:

The customer must contact the telephone company to initiate Automatic Recall service. A service order is required. Once the appropriate translations have been made to the customer's line, the customer activates the service by dialing the service access code \*69 (1169 for rotary dial), then depending on how the Local Exchange Company chooses to implement Automatic Recall, one of the following happens:

#### One-Level Activation Procedure

Upon activation using \*69 (1169 for rotary dial), the called line is checked for busy/idlestatus and class of service. If the called line is idle and the class of service is permissible, call setup is attempted. If the called line is busy, the customer receives an announcement stating the called line is busy. The line will be checked periodically for busy/idle status and when the line becomes idle the customer will hear a special ring. Upon answering the special ring, one of the following happens:

- Call setup is attempted, the customer hears audible ringing while the called party receives power ringing. Or
- 2. The customer receives an announcement indicating the following:

IA ESS & 5ESS: The called line has become busy again, hang up and try your call again. (This terminates Automatic Recall for this activation.) The customer can reactivate Automatic Recall by again using the service access code.

DMS-100: The called line has become busy again, monitoring of the line will resume, hang up and wait for the special ringback.

### Two-Level Activation Procedure:

Upon activation using \*69 (1)69 for rotary dial), an announcement is provided informing the customer that Automatic Recall has been accessed. If the incoming number is valid, the number, date and time of the call is voiced back to the customer. (If the number is marked private then a private indication is voiced back to the customer instead of the number.) The customer is then instructed to dial "I" to activate Automatic Recall or

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hang up to abort the request. If the customer dials "1", the service proceeds as described above under the One-Level Activation Procedure.

To cancel all outstanding Automatic Recall requests, the customer may deactivate the service by using \*89 (1189 for rotary dial).

### TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.2
EWSD	9
GTD-5	1.6.3.3
DMS-10	404.4
IA ESS	LAE10*
5ESS	5E5
DMS-100	BCS28

Note: Available on intraoffice basis with generic IAE9,

- 2. The serving central office switch must be equipped with the appropriate CLASS<sup>BM</sup> Automatic Recall software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS and CommonChannel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7. This service is only offered on an intraLATA basis at this time.
- 3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DIO). This service is also unavailable to customers that have denied originating and denied terminating treatment and multiline hunt groups that cannot have ringback directed to the calling station. In addition, because of the special ringing, this service may not work where channel banks (FX service), MFTs or bridge lifters are used (depending upon circuit design).
- 4. The special ringing that the customer hears when call setup is being attempted consists of 2 short rings and 1 long-ring in 6 seconds. Some telephone companies use this pattern for more than one service.
- There are some digital loop carrier plug-ins that will not transmit the required special ringing.
- 6. The customer can have multiple Automatic Recall activations in effect concurrently.
- 7. Automatic Recall cannot be activated rowards a line that has Call Forwarding Variable or Selective Call Forwarding Activated. If the service cannot be activated, the caller is routed to a denial announcement or tone.

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- 8. In some electronic key sets, power ringing generates a preset ringing pattern regardless of the ringing pattern generated by the originating central office. Therefore customers with these electronic sets may not be able to differentiate regular ringing for incoming calls from special ringing for Automatic Recall.
- 9. The length of time the called line is monitored for busy/idle status is a telephone company settable parameter ranging from 16-45 minutes. The interval is set on a per switch basis, and is generally the same throughout a LEC.
- 10. The customer can use the telephone for incoming and outgoing calls while waiting for the special ringback.

  However, the special ringback will not be attempted while the customer is using the telephone.

#### 11. References:

GR-227 CLASS<sup>SM</sup> Feature: Automatic Recall (A Module of LSSGR, FR-64), FSD 01-02-1260, Issue 2, April 2002 (replaces TR-NWT-000227 Issue 3 & GR-227 Issue 1).

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# Call Forwarding - Busy Line Intraswitch (1046)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is activated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number must be in the same central office switch. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Call Forwarding - Busy Line Intraswitch	Call Forwarding Busy Line - Fixed	CNS

#### FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

### TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17
EWSD	7
GTD-5	1.6.2.1
DMS-10	404.2
IA ESS	1AE8A
5ESS	5E2(2)
DMS-100	BCS24
#2EAX	1.2.9.1

- 2. Multiline customers can have CFBL on each line if desired.
- 3. Calls may be forwarded to any telephone number, including DID numbers, served by the same central office that serves the base station.

4. Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

# 5. References:

- SR-504 SPCS Capabilities and Features (A Module of LSSGR, FR-64), Issue 1, March 1996 (formerly TR-NWT-000504)
- GR-568 LSSGR: Series Completion, FSD 01-02-0801 (A Module of LSSGR, FR-64), Issue 1, June 2000 (replaces TR-TSY-000568 Issue 1 no technical changes).
- GR-586 LSSGR: Call Forwarding Subfeatures, FSD 01-02-1450 (A Module of LSSGR, FR-64). Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1).

# Call Forwarding - Busy Line Interswitch (1047)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is acrivated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number may be in the same or in different central office switches. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Call Forwarding - Busy Line Interswitch	Call Forwarding Busy Line - Fixed	CNS

#### FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding- Busy Line or Don't Answer- Customer Control of Activation/Deactivation" and "Call Forwarding- Busy Line or Don't Answer- Customer Control of Forward-To Number" for the services with customer control.)

# TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Enrilest Generic Release
DCO	17
EWSD	7
GTD-5	1.6.2.1
DMS-10	305.2
IA ESS	1AE10.09*
5ESS	5E2(2)
DMS-100	BCS24
#2EAX	1.2.9.1

<sup>\*</sup> References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for turure generic releases that are referenced in this document, the availability of some services may be affected

2. Multiline customers can have CFBL on each line of desired.

- Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central
  office.
- 4 Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

# 5. References:

- SR-504 SPCS Capabilities and Features (A Module of LSSGR, FR-64), Issue 1, March 1996 (formerly TR-NWT-000504).
- GR-568 LSSGR: Series Completion, FSD 01-02-0801 (A Module of LSSGR, FR-64), Issue 1, June 2000 (replaces TR-TSY-000568 Issue 1 no technical changes).
- GR-586 LSSGR: Call Forwarding Subfeatures, FSD 01-02-1450 (A Module of LSSGR, FR-64), Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1).

### Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation (1048)

This capability provides ESP's clients with the ability to activate the Call Forwarding Busy Line and Call Forwarding Don't Answer features by dialing an access code in the form of \*XX. The ESP's client will be able to deactivate the Call Forwarding Busy Line and Call Forwarding Don't Arswer features by dialing another access code, also in the form of \*XX.

Limitations may apply, depending on the type of switching systems serving therein.

Generic Name of ONA Service	VER(ZON Product Name	BSE or CNS
Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation	Call Forward-Bury/No Answer - Variable	CNS

#### FEATURE OPERATION:

Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to activate and deactivate Call Forwarding Busy Line (CFBL) and/or Call Forwarding Don't Answer (CFDA). Activation of these services allows the customer to have an incoming call redirected to a telephone number preset at the time the service was established by service order. The service is activated/deactivated by the subscriber dialing the assigned access code. Access codes are in the same format as those for Call Forwarding Variable (\*XX). CFDA and CFBL may have different activation/deactivation codes. The party activating these services does not have to be in the same central office switch as the forwarded telephone number.

Also see the service called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number."

#### TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17
EWSD	7
GTD-5	1.6.4.1
DMS-10	404.2
1A ESS	1AE10.09*
5ESS	5E2(2)
DMS-100	BCS27
#2EAX	1.2.9.1

<sup>\*</sup> References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features folium generic releases that are referenced in this document, the availability of some services may be affected.

- 2. Multiline customers can have CFBL/DA Customer Control on each line if desired.
- 3. References;
  - GR-586 LSSGR: Call Forwarding Subfeatures, FSD 01-02-1450 (A Module of LSSGR, FR-64), Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1).

### Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number (1049)

This capability provides the ESPs client with the ability to change the Forward To number for Call Forwarding Busy Line by dialing an access code in the form of \*XX, and to change the Forward To number for Call Forwarding Don't Answer by dialing another access code, also in the form of \*XX. Limitations may apply, depending on the type of switching system serving the client.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Call Forwarding - Busy Cine or Don't Answer- Customer Control of Forward-To Number	Call Forward-Bury/No Answer - Vanable	CNS

#### FEATURE OPERATION:

This feature can be controlled (activated or deactivated) by the customer in two ways.

- The customer dials an activation code and the remote DN or the deactivation code. The codes are in the same format as Call Forwarding Variable (\*XX).
  - Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to have an incoming call redirected to another Directory Number (DN) if the number dialed(the subscriber's number) is in a busy condition or is not answered. The service is activated by the subscriber dialing an activation code, much in the same manner as Call Forwarding Variable, and entering the remote number that calls will be forwarded to. The called number and the redirected number do not have to be in the same switch. The service and forwarded to number are deactivated by dialing the deactivation code.
- 2. The customer dials an access number (e.g., an 800 number or a regular NPANXX-XXXX number) from any station. An amounteement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to CFBL, a prompt to select the feature (e.g., CFBL/DA) and the specific action (e.g., activation or deactivation) is returned. After making his change the customer can wait for a confirmation or use, at any time, the verify capebility to determine the feature status and the forward to number.

#### TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17
EWSD	7
GTD-5	1.6.2.1
DMS-10	404.3
TA ESS	LAE10.09*
5ESS	5E2(2)
DMS-100	BCS27
#ZEAX	1.2.9.1

<sup>\*</sup> References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability oftny features for future generic releases that are referenced in this document, the availability of some services may be affected.

- 2. Multiline customers can have CFBL/DA Customer Control on each line if desired,
- 3. The maximum number of digits that caube programmed are:

5ESS - 24 digits

DMS-100 - 24 digits

4. Subscribers may have CFBL with CFDA, Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. In the 1A ESS Call Waiting takes precedence and does not interact with CFBL. Un-answered Call Waiting calls do not revert to CFDA in either the 1A ESS or the 5ESS.

#### 5. References:

 GR-586 LSSGR: Call Forwarding Subfeatures, FSD 01-02-1450 (A Module of LSSGR, FR-64), Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1)

# Call Forwarding - Don't Answer Intraswitch (1050)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user specified number of rings (or time interval). The service is activated by a service order. The callednumber and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval) at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded number) must be in the same central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Call Forwarding - Don't Answer Intraswitch	Call Forward No Answer - Fixed	CNS

### FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" number and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

### TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17
EWSD	7
GTD-3	1.6.2.1
DMS-10	404.2
1A ESS	1 AESA
5ESS	5E2(2)
OMS-100	BCS24
#2EAX	1.2.9.1

2. Multiline customers can have CFDA on each line if desired.

- 3. Calls may be forwarded to any telephone number served by the same central office that serves the base station except DID numbers in the TA ESS. Forwarding to DID numbers in the TAESS will be available in generic 1AE10.09\*. (\* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.)
- 4. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variatie (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

#### 5. References:

- SR-504 SPCS Capabilities and Features (A Module of LSSGR, FR-64), Issue 1, March 1996 (formerly TR-TSY-000504).
- GR-586 LSSGR: Call Forwarding Subfeatures, FSD 01-02-1450 (A Module of LSSGR, FR-64), Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1).

### Call Forwarding - Don't Answer Interswitch (1051)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user specified number of rings (or time interval). The service is activated by a service order. The called number and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval)at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded-to number) may be in the same or a different central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	VERIZON Product Name	BSE or CNS
Call Forwarding - Don't Answer Interswitch	Call Forward-No Answer – Fixed	CNS
	Call Forward Busy-No Answer - Fixed	CNS

#### FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" nutuber and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding-Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

# TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	Earliest Generic Release
DCO	17.1
FWSD	9
GTD-5	1.6.2.1
DMS-10	305.2
IA ESS	1AE10.09*
5ESS	5E2(2)
DMS-100	BCS24
#2EAX	1.2.9.1

<sup>\*</sup> References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

Multiline customers can have CFDA on each line if desired.

- 3. Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central office.
- 4. The caller may hear multiple call progress tones if the remote DN is busy.
- 5. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

# 6. References:

- SR-504 SPCS Capabilities and Features (A Module of LSSGR, FR-64), Issue 1, March 1996 (Ionnerly TR-TSY-000504).
- GR-586 LSSGR: Call Forwarding Subfeaturea, FSD 01-02-1450 (A Module of LSSGR, FR-64), Issue 2, April 2002 (replaces TR-TSY-000586 Issue 1 & GR-586 Issue 1)